

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A transmission device for transmitting into a human's or animal's body, from outside of the human's or animal's body, an alternating magnetic field to a receiver, which is ~~implanted~~ implantable in a ~~the~~ human's or animal's body, to supply energy drawn from the alternating magnetic field to an energy consuming implant, which is implantable in the human's or animal's body, the transmission device comprising:

a coil ~~adapted to generate~~ for generating outside of the human's or animal's body the alternating magnetic field for supplying the energy to the implant ~~in a desired direction towards the implanted receiver,~~

the coil ~~having a longitudinal extension,~~ extending longitudinally between a front end to be directed towards the receiver and a rear end to be directed away from the receiver, ~~characterized by~~

a shield ~~adapted to for~~ shielding the an environment outside of the human's or animal's body from the alternating magnetic field generated by the coil by surrounding the coil, except at the front end of the coil so that the alternating magnetic field is transmitted towards the receiver when the front end of the coil is directed towards the receiver,

the shield including a magnetizable core extending inside of the coil and a magnetizable casing integrated with the core and surrounding the rear end of the coil and the circumference of the coil along at least a portion of the longitudinal extension of the coil .

2. (Currently Amended) ~~A-The~~ transmission device according to claim 1, wherein the magnetizable casing completely surrounds the coil, except for the front end ~~thereof~~of the coil.

3. (Currently Amended) ~~A-The~~ transmission device according to claim 2, wherein the core wholly extends along the longitudinal extension of the coil.

4. (Currently Amended) ~~A-The~~ transmission device according to claim 1, wherein the magnetizable casing surrounds the circumference of the coil along a portion of the longitudinal extension of the coil.

5. (Currently Amended) ~~A-The~~ transmission device according to claim 4, wherein the core and/or coil extends past the magnetizable casing along the longitudinal extension of the coil, as seen ~~in~~ from the direction towards the front end of the coil.

6. (Currently Amended) ~~A-The~~ transmission device according to claim 1, wherein the magnetizable casing comprises a circular cylindrical wall and a circular gable wall joined to the cylindrical wall, the core extends centrally in the cylindrical wall from the gable wall, and the coil is applied on the core with the rear end of the coil facing the gable wall.

7. (Currently Amended) ~~A-The~~ transmission device according to claim 6, wherein the cylindrical wall is ~~provided with~~ includes cut-outs.

8. (Currently Amended) ~~A-The~~ transmission device according to claim 1, wherein the shield is made of ferrite.

9. (Currently Amended) ~~A-The~~ transmission device according to claim 1, further comprising a plastic box, in which the coil and shield are arranged such that they are located at a distance, in the order of centimeters, from an operator's hand, when the operator holds the transmission device during operation.

10. (Currently Amended) An apparatus for transferring wireless ~~transfer of~~ energy from outside a human's or animal's body into the human's or animal's body to an energy consuming medical device ~~implanted~~ implantable in the human's or animal's body, the apparatus comprising:

a transmission device operable from outside the human's or animal's body for ~~transmission of~~ transmitting into the human's or animal's body an alternating magnetic field, and

a receiver implantable in the human's or animal's body for receiving and drawing energy from the alternating magnetic field to be supplied to the energy consuming ~~implanted~~ implantable medical device,

the transmission device including:

at least one coil for generating outside of the human's or animal's body the alternating magnetic field for supplying energy to the medical device implantable in the human's or animal's body, in a desired direction towards the receiver,

the coil ~~having a longitudinal extension, extending longitudinally between a~~ front end to be directed towards the receiver and a rear to be directed away from the receiver, ~~characterized by~~

at least one shield ~~adapted to for shielding the an~~ environment outside of the human's or animal's body from the alternating magnetic field generated by the coil by surrounding the coil, except at the front end of the coil so that the alternating magnetic field is transmitted towards the receiver when the front end of the coil is directed towards the receiver,

the shield including a magnetizable core extending inside of the coil and a magnetizable casing integrated with the core and surrounding the rear end of the coil and

the circumference of the coil along at least a portion of the longitudinal extension of the coil.

11. (Currently Amended) An apparatus ~~according to claim 10~~ for transferring wireless of energy from outside a human's or animal's body into the human's or animal's body to an energy consuming medical device implantable in the human's or animal's body, the apparatus comprising:

a transmission device operable from outside the human's or animal's body for transmitting into the human's or animal's body an alternating magnetic field, wherein the transmission device ~~comprises~~ comprising a first transmitter and a second transmitter, and

a receiver implantable in the human's or animal's body for receiving and drawing energy from the alternating magnetic field to be supplied to the energy consuming implantable medical device,

the first and second transmitters ~~include~~ including:

first and second coils, respectively, for generating respective alternating magnetic fields in two different directions towards the receiver,

each of the first and second coils ~~having a longitudinal extension, extending longitudinally between~~ a front end of the respective coil to be directed towards the receiver and a rear end of the respective coil to be directed away from the receiver, and

~~the first and second transmitters include~~ first and second shields adapted to for shielding ~~the an~~ environment outside of the human's or animal's body from the alternating magnetic fields by surrounding the respective coil, except at the front end of the respective coil, so that the alternating magnetic field is transmitted towards the receiver when the front end of the respective coil is directed towards the receiver,

each of the first and second shields including a magnetizable core extending inside ~~the of its respective~~ coil and a magnetizable casing integrated with the core and surrounding the rear end ~~of the coil~~ and the circumference of ~~the of its respective~~ coil along at least a portion of the longitudinal extension of ~~the its respective~~ coil.

12. (Currently Amended) ~~An~~ The apparatus according to claim 10, wherein the magnetizable casing completely surrounds the coil except the front end thereof.

13. (Currently Amended) ~~An~~ The apparatus according to claim 12, wherein the core wholly extends along the longitudinal extension of the coil.

14. (Currently Amended) ~~An~~ The apparatus according to claim 10, wherein the magnetizable casing surrounds the circumference of the coil -along a portion of the longitudinal extension of the coil.

15. (Currently Amended) ~~An~~The apparatus according to claim 14, wherein the core and/or coil extends past the magnetizable casing along the longitudinal extension of the coil, as seen ~~in~~from the direction towards the front end of the coil.

16. (Currently Amended) ~~An~~The apparatus according to claim 10, wherein the magnetizable casing comprises a circular cylindrical wall and a circular gable wall joined to the cylindrical wall, the core extends centrally in the cylindrical wall from the gable wall and the coil is applied on the core with the rear end of the coil facing the gable wall.

17. (Currently Amended) ~~An~~The apparatus according to claim 16, wherein the cylindrical wall is ~~provided with~~includes cut-outs.

18. (Currently Amended) ~~An~~The apparatus according to claim 10, wherein the shield is made of ferrite.

19. (Currently Amended) ~~An~~The apparatus according to claim 10, further comprising a plastic box, in which the coil and shield are arranged such that they are located at a distance, in the order of centimeters, from an operator's hand, when the operator holds the transmission device during operation.

20. (Currently Amended) A method for transferring harmless wireless ~~transfer of~~ energy from outside a human's or animal's body into the human's or animal's body to an energy consuming medical device ~~implanted~~ implantable in a human's or animal's body, the method comprising the steps of:

implanting in the human or animal a receiver capable of receiving and drawing energy from an alternating magnetic field to be supplied to the energy consuming medical device,

manually holding external to the body a transmission device capable of transmitting the alternating magnetic field, the transmission device including:

a coil for generating from outside of the human or animal the alternating magnetic field for supplying energy to the medical device implanted in the human or animal, and having a longitudinal extension,

the coil extending longitudinally between a front end directed away from ~~the~~ a hand holding the transmission device and a rear end facing the hand holding the transmission device, and

transmitting by means of the transmission device the alternating magnetic field to the implanted receiver, ~~characterized by and~~

shielding by means of a shield the hand holding the transmission device from the alternating magnetic field generated by the coil by surrounding at least a portion of the coil, the shield including a magnetizable core extending inside of the coil of the transmission device and a magnetizable casing integrated with the core of the

transmission device and surrounding the rear end of the coil and the circumference of the coil along at least a portion of the longitudinal extension of the coil.

21. (Currently Amended) A method for transferring harmless wireless ~~transfer of~~ energy from outside a human's or animal's body into the human's or animal's body to an energy consuming medical device ~~implanted~~ implantable in a ~~the~~ human's or animal's body, the method comprising the steps of:

implanting in the human's or animal's body a receiver capable of receiving and drawing energy from an alternating magnetic field to be supplied to the energy consuming medical device,

providing ~~an external~~ a transmission device external to the human's or animal's body that is capable of transmitting the alternating magnetic field, and the transmission device including a coil having a longitudinal extension, extending longitudinally between a front end and a rear end,

positioning the transmission device relative to the body so that the front end of the coil is directed towards the receiver and the rear end of the coil is directed away from the receiver, and

transmitting to the implanted receiver by means of the transmission device the alternating magnetic field for supplying energy to the medical device implantable in the human's or animal's body, and to the implanted receiver, characterized by

shielding by means of a shield ~~the~~ an environment outside of the human's or animal's body from the alternating magnetic field generated by the coil by surrounding the coil, except at the front end of the coil, so that the alternating magnetic field is transmitted towards the receiver when the front end of the respective coil is directed towards the receiver,

the shield including a magnetizable core extending inside of the coil of the transmission device and a magnetizable casing integrated with the core of the transmission device and surrounding the rear end of the coil and the circumference of the coil along at least a portion of the longitudinal extension of the coil.